

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Sterchi, et al.

Serial No. TBA 10/633255

Filed: Herewith 8-1-03

For: REGENERATIVE PUMP FOR
HYDROGEN GAS APPLICATIONS
AND METHOD OF USING THE
SAME

Group Art Unit: TBA 1746

Examiner: TBA WILLS, M

Mail Stop: Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**PETITION TO MAKE SPECIAL DUE TO ENVIRONMENTAL QUALITY/ENERGY
CONSERVATION**

Applicants of the above-referenced application, John Patrick Sterchi and Jerry Alan Piontkowski, hereby petition to make the above-identified application special because the invention materially enhances the quality of the environment and/or materially contributes to the conservation of energy resources.

The regenerative pump and method are preferably used in a Hydrogen Delivery and Recovery Sub-System (HDRS) of a hydrogen-based fuel cell system. The regenerative pump and method recirculates unused hydrogen back to the inlet of the hydrogen fuel cell stack of the system. The regenerative pump and method, among other things, reduces the load on the hydrogen fuel cell stack, inhibits anode degradation in the hydrogen fuel cell stack, improves the efficiency of the hydrogen fuel cell stack, and promotes the use of hydrogen fuel cells.

An increase in hydrogen fuel cell use enhances the quality of the environment and/or materially contributes to the conservation of energy sources because hydrogen fuel cells are used to power electric motors, replacing internal combustion engines, which run on gasoline and diesel fuel. This reduces the amount of oil consumed, materially contributing to the

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PETITION GRANTED

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William Krynski
Special Program Examiner
TC 1700